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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,864	06/30/2000	Andrew Bencich Woodside	24760A	9951

7590 08/27/2002

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EXAMINER
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NGUYEN, KIMBERLY T

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 08/27/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

AS-11

**Office Action Summary**

Application No.

09/607,864

Applicant(s)

WOODSIDE ET AL.

Examiner

Kimberly T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 June 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6</u> | 6) <input type="checkbox"/> Other:  |

## **DETAILED ACTION**

### ***Response to Amendment***

This action is in response to the amendment submitted on June 10, 2002. Due to Applicants' remarks, the previous rejection of claims **15, 17-18, 23, and 25-27** under 35 USC 102(b) are withdrawn. Due to Applicants' remarks, the previous rejection of claims **15 and 24** under 35 USC 103(a) are withdrawn.

### ***Claim Objections***

Due to Applicants' amendments, the previous objections of claims 17, 24, and 26 are withdrawn.

### ***Claim Rejections - 35 USC § 103***

**Claims 15, 16, and 19-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosuga et al., U.S. Pat. No. 4,960,642 as previously stated in the Office Action submitted on November 30, 2001.

**Claims 15, 17-18, 23, and 25-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosuga et al., U.S. Pat. No. 4,960,642 in view of Kobayashi et al., U.S. Pat. No. 4,356,228.

Kosuga shows pellets for making electromagnetic wave shielding material comprising carbon conductive fibers (column 2, lines 26-27), an organic coating of a thermoplastic resin oligomer having a viscosity of not more than 10,000 centipoises when melted (column 1, lines 21-28 and claim 1), and a thermoplastic resin coating (polymer coating) (claim 1). Kosuga shows that the fibers have a length of 6mm (column 4, line 45). Kosuga further shows that the conductive fibers are bundled in groups of 1,000 to 10,000 (column 2, lines 30-32). Kosuga also

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shows that the thermoplastic resin coating comprises acrylonitrile-butadiene-styrene copolymer (claim 3).

*↳ can be impregnated into core*

Though Kosuga shows that the organic thermoplastic resin oligomer material has a viscosity of no more than 10,000 centipoises when melted (claim 1), Kosuga does not show that the pellets have such a viscosity at temperatures of from 80°C-180°C as in instant claims 15 and 19-22. Kosuga uses the same organic thermoplastic resin oligomer materials as in Applicants' invention. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an organic material which has a viscosity of no greater than 1500 centipoises at temperature ranges of 80°C - 180°C since it is known in the art that such oligomers would have those viscosities.

**Claims 15 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosuga et al., U.S. Pat. No. 4,960,642 in view of Kobayashi et al., U.S. Pat. No. 4,356,228.

Kosuga is relied upon as above for claim 15. Kosuga shows that the organic thermoplastic resin oligomers used to coat the conductive carbon fibers include polyester resins and ethylene-ethylacrylate resins (claims 2-4). Kosuga does not show that the organic thermoplastic resin oligomers are comprised of those listed in instant claim 24.

Kobayashi shows a fiber-reinforced moldable sheet comprising a thermoplastic resin and reinforcing agents of carbon fibers incorporated into the thermoplastic resin (Abstract). Kobayashi shows that the thermoplastic resins used include polyesters (column 3, lines 64-68), poly(bisphenol A carbonate), polysulfones, styrene resins, and acrylic resins (column 4, lines 1-4). It would have been obvious to one of ordinary skill in the art at the time the invention was

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made to use a bisphenol A resin in the organic thermoplastic resin oligomer coating of the present invention since bisphenol A, polyester, and acrylic resins are functional equivalents.

Though Kosuga shows that the organic thermoplastic resin oligomer material has a viscosity of no more than 10,000 centipoises when melted (claim 1), Kosuga does not show that the pellets have such a viscosity at temperatures of from 80°C-180°C as in instant claims 15 and 19-22. Kosuga uses the same organic thermoplastic resin oligomer materials as in Applicants' invention. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an organic material which has a viscosity of no greater than 1500 centipoises at temperature ranges of 80°C - 180°C since it is known in the art that such oligomers would have those viscosities.

#### ***Response to Arguments***

Applicants' argument filed June 10, 2002 have been fully considered but they are not persuasive and are moot in view of the new grounds of rejection of claims 15, 17-18, 23, and 24-27.

On pages 2-3, Applicants argue that Kosuga does not use the same organic thermoplastic resin materials as in Applicants' invention and that Applicants use a different class of materials. Examiner is not persuaded. Although Kosuga does not specifically use the same oligomer materials as in the instant invention (claim 24), Kosuga uses polyester resins and ethylene-ethylacrylate resins. Kobayashi shows that thermoplastic resins such as polyesters, acrylic resins, and poly(bisphenol A carbonate) can be used in a fiber-reinforced moldable sheet. Kobayashi shows that it is obvious to use bisphenol A as an organic material because it is known that poly(bisphenol A carbonate) is a functional equivalent of the organic materials listed in

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instant claim 24 and thus, would be an obvious substitute for the polyester resins and ethylene-ethylacrylate resins in Kosuga. As to Applicants' argument on page 3 that the materials of Kosuga use materials that are different because they have a relatively higher degree of polymerization and thus, a higher viscosity, Examiner is not persuaded because Applicants do not claim the degrees of polymerization.

On page 3, Applicants argue that Applicants' materials have a very low viscosity whose ranges fall far outside the range of the materials of Kosuga. Examiner disagrees. On page 5 of the previous office action, it was shown that Kosuga shows organic thermoplastic resins which have a viscosity of *no more than 10,000 centipoises*. This clearly falls within the ranges which Applicants claim in instant claims 15 and 19-22.

On page 4, Applicants argue that the Kosuga and Kobayashi references are distinct because Kosuga and Kobayashi use the resins for different purposes and one would not be motivated to substitute the resins shown. Examiner is not persuaded. Kosuga and Kobayashi are used in combination to show that the resins are functional equivalents and can be substituted for one another, and not to show what their intended uses are. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. It does not matter what the intended use is in an article claim. The combination of the inventions in Kosuga and Kobayashi shows Applicants' invention without any structural differences. Thus, such a combination would be capable of "coating a fiber core," which is the intended use of Applicants' invention. The prior art structure of Kosuga and Kobayashi thus meets the claims of Applicant's disclosure.

*Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly T. Nguyen whose telephone number is (703) 308-8176. The examiner can normally be reached on Monday to Friday, except on every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

